DEPARTMENT OF AGRICULTURE APPROPRIATIONS, 1953

TUESDAY, APRIL 1, 1952

UNITED STATES SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D. C.

The subcommittee met at 10:30 a. m., pursuant to recess, in room F–39, the Capitol, Hon. Carl Hayden, presiding.

Present: Senators Hayden, Maybank, Young, Cordon, and Thye.

CONTROL OF FOREST PESTS

SALARIES AND EXPENSES

STATEMENTS OF DR. W. L. POPHAM, ASSISTANT CHIEF, BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE; EDWARD P. CLIFF, ASSISTANT CHIEF, FOREST SERVICE; CHARLES MELICHAR, ASSISTANT CHIEF, DIVISION OF TIMBER MANAGEMENT, FOREST SERVICE; J. F. SHANKLIN, CHIEF, LAND USE MANAGEMENT, DEPARTMENT OF THE INTERIOR; DR. C. H. HOFFMANN, ACTING FOR ASSISTANT CHIEF, BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE; R. A. SHEALS, ASSISTANT CHIEF, BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE; HENRY G. HERRELL, DEPUTY ASSISTANT CHIEF (ADMINISTRATION), BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE; HENRY WOLD, BUDGET OFFICER, FOREST SERVICE; DALE ROTHROCK, CHIEF, FISCAL SECTION, DEPARTMENT OF THE INTERIOR; AND RALPH S. ROBERTS, DIRECTOR OF FINANCE AND BUDGET OFFICER, DEPARTMENT OF AGRICULTURE

BUDGET SCHEDULE

(Schedules from the justifications follow:)

Control of forest pests

	Forest pest Control Act	White-pine blister rust	Total
Appropriation act, 1952, and base for 1953	$2,700,000	$3,300,000	$6,000,000
Budget estimate, 1953	4,000,000	4,000,000	8,000,000
Increase	+1,300,000	+700,000	+2,000,000

96708—52——27

Summary of increases, 1953

Forest Pest Control Act:	
For expansion of detection and appraisal surveys	+$148,000
For control of epidemics of spruce bark beetle in Colorado; spruce budworm in Idaho, Oregon, and Montana; bark beetles in Idaho, Montana, Wyoming, Colorado, New Mexico, California, and Mississippi; and smaller projects involving other insects and diseases	+1,152,000
Subtotal	+1,300,000
White-pine blister rust:	
Increase to expand control operations in the Northwest on State and private lands adjacent to or intermingled with Federal land, and on lands under the jurisdiction of the Forest Service	+700,000
Total	+2,000,000

Project statement

Project	1951	1952 (estimated)	Increase	1953 (estimated)
1. Forest Pest Control Act:				
(a) Detection and appraisal surveys	$273,903	$281,000	$148,000	$429,000
(b) Operations to control destructive forest pests on lands irrespective of ownership	3,355,062	1,919,000	+1,152,000	3,071,000
(c) Contingency fund		500,000		500,000
Subtotal	3,628,965	2,700,000	1,300,000	4,000,000
2. White-pine blister rust.				
(a) Leadership, coordination, and technical direction of white-pine blister control (Entomology and Plant Quarantine)	718,185	682,000		682,000
(b) Blister-rust quarantine enforcement (Entomology and Plant Quarantine)	15,324			
(c) Blister-rust control operations on the national forests (Forest Service)	1,773,907	1,750,000	+463,000	2,213,000
(d) Blister-rust control on lands under jurisdiction of Interior Department (Department of the Interior)	515,365	505,000		505,000
(e) Cooperative blister-rust control on State and privately owned lands (Entomology and Plant Quarantine)	352,889	303,000	+237,000	600,000
Subtotal	3,375,670	3,300,000	+700,000	4,000,000
Unobligated balance	156,003			
Total pay-adjustment costs	[ ]	[168,000]	[+53,600]	[221,600]
Total available or estimate	7,160,638	6,000,000	2,000,000	8,000,000
Transferred in 1952 estimates to—				
"Salaries and expenses, Office of Information, Department of Agriculture"	+250			
"Salaries and expenses, Entomology and Plant Quarantine, Agricultural Research Administration"	+557,821			
1950 appropriation available in 1951	−2,079,459			
Reduction pursuant to sec. 1214	+60,750			
Total appropriation or estimate	5,700,000	6,000,000		

Senator HAYDEN. The committee will be in order.

Dr. Popham, do you desire to appear on forest pests this morning?

Dr. POPHAM. Yes, sir.

Senator HAYDEN. You may proceed.

Dr. POPHAM. Mr. Chairman, under the item "Control of forest pests," the first item relates to programs financed under Forest Pest Control Act funds.

SURVEYS FOR CONTROL OF FOREST PESTS

Forest pests continue to be a rather serious problem in certain parts of the country, but we have some rather encouraging information regarding some of the big programs we have been involved in in recent years.

Before going into the individual programs, I would like to take a few minutes to discuss the surveys that precede the control programs.

We feel that surveys are basic to the efficient use of the moneys for control. When the Forest Pest Act of 1947 became law, there were a number of serious outbreaks of forest pests in the country. Some of them were of long standing and had gotten out of hand, so to speak, before any effort was made to control them.

There were several reasons for this: They occurred during wartime; manpower was short and materials were short. In a good many cases we lacked the know-how to control them. Some of them were in remote areas that were inaccessible from the ground without expensive road construction.

Since that time, I think we have learned a lot about how to detect these outbreaks in the early stages and how to go about efficient control on a preventive basis.

In fact, I would like to review a little bit of the history of the development of the surveys.

SURVEY TECHNIQUES IMPROVED

The first relates to the techniques that are now in use for detecting and mapping insect and disease outbreaks from the air. By sketching and photographing from an airplane, it is possible to locate, with a pretty high degree of accuracy, areas where insects or diseases are causing severe damage or killing the trees.

This reconnaissance-type survey can be done at the rate of about 100,000 acres in 1 hour of flying time, which seems almost incredible.

But the accuracy with which we are able to determine where insects are building up is proving quite effective.

Senator HAYDEN. Does it make any difference what season of the year the aerial survey is made in?

Dr. POPHAM. Yes; it does. It depends somewhat on the particular bug that is involved. Of course, when the bark beetles hit a tree and it begins to turn, that may be late in the same season of the strike, or it may be the following season.

But the purpose of this reconnaisance is to pick out these areas.

SPRUCE BUDWORM OUTBREAK IN NORTHEAST

I might use the example of the work that was done in the Northeast on spruce budworm. There is an outbreak of spruce budworm in Canada, which has caused tremendous damage since 1946. It began to spread into northern Maine and northern New York to the extent that we were getting scattered trees either killed or severely damaged.

That area has been kept under observation over the past several years.

In 1950 it looked as though we might be facing a very severe outbreak in the New England area.

In 1951, however, the area where dead and dying trees were located as a result of a reconnaissance was cut to about a third of what it was the year before.

As a result of these aerial surveys, it was possible to observe developments from year to year, and we feel now that no chemical control is going to be necessary unless there is a reversal in the trend in insect population in the area.

Senator HAYDEN. What efforts have the Canadians made to eradicate the disease on the other side of the border?

Dr. POPHAM. That outbreak has been so extensive that they have undertaken control only in certain designated or high priority areas. The worst of the outbreak right now is in Quebec. It started in Ontario some seven or eight years ago and has been spreading generally eastward.

I might add, before leaving the surveys, that reconnaissance observations with aircraft are followed up with checking by ground crews.

PARTICIPATION BY STATE AND LOCAL FORESTERS AND WOODSMEN

When we began to plan surveys under this legislation, it was felt that there were many trained foresters, Federal, State, and private, in these areas and that it was more a matter of getting them to observe conditions and to report them in a uniform manner than to employ additional people who were specialists in that particular field.

As an example of how that has worked, I might cite the situation in Oregon, where we have been fighting spruce budworm over the past 3 years. In 1951, about 49 million acres were surveyed in Oregon. There were 115 men devoting time to the work. Eight of them were forest entomologists in the Bureau of Entomology and Plant Quarantine; the remainder were trained foresters or entomologists furnished by industry or by the States and the Federal land management agencies.

This is made possible by the fact that in any given area there probably are not more than three or four, or perhaps five, different bugs that are apt to cause extensive damage.

Any man who is trained in forest management or knows anything about forestry, can become familiar with these species to the extent of knowing the life history, where to look for them, and what constitutes the first signs of an outbreak.

Our plan has been to develop that type of organization countrywide, using a few technicians to assemble the information and to check areas where reports from the people in the woods indicate that trouble may be coming along.

Along with the developments in survey procedures, of course, we have had rather outstanding developments in methods of applying chemical control.

Senator HAYDEN. Might I ask right there: How do you arrange for this aerial survey? Is it by contracting with private flyers?

Dr. POPHAM. It has been done both ways, and it can be done by contract flyers. It does take trained observers in planes to do the mapping.

It began, Senator, as an experimental undertaking, with equipment owned and operated by the Government. As it expands, the flying can be done on a contract basis, by custom operators.

COSTS OF AERIAL SURVEYS

Senator HAYDEN. If you can map 100,000 acres in an hour, you can cover a lot of land in 1 day. How much does it cost to operate a plane to do a day's work?

Dr. POPHAM. A plane of that type costs around $20 an hour. We figure that it costs about 20 cents per thousand acres to make this reconnaisance survey.

Senator HAYDEN. Is that from the air and on the ground?

Dr. POPHAM. No, from the air only.

The cost of ground work, of course, depends on what the aerial photographs and aerial observers turn up. It may be rather costly to get into some of the remote areas where there is indication of trouble.

However, using the aerial maps as a guide, ground crews can go directly to the spot where the trouble exists.

TIMING OF SURVEYS

Senator CORDON. At what time of the year do they make those surveys?

Dr. POPHAM. That, Senator, depends upon the bug that we are dealing with.

Senator CORDON. Take the spruce budworm in Oregon.

Dr. POPHAM. That would come in the fall of the year. By that time the bug has had the opportunity to do its damage and the defoliation is showing up to the point where it can be photographed or mapped from the air.

Senator CORDON. That last statement of yours would indicate to me that the time element is dependent altogether on what time during a given year the infestation has reached the point where, living off the trees, the bug has defoliated then to the point where it is visible from a considerable altitude.

Dr. POPHAM. That is right.

And in the case of the bark beetles, it would be at the time when the tree has been weakened by the beetles to the extent where it begins to show a change of color in the top.

It is a matter of conducting the survey as soon after the active season of these bugs as possible.

Senator CORDON. In an aerial picture of that type, you would not see one or two trees alone, but there would have to be quite a group of trees to show up in the picture, is that not right?

Dr. POPHAM. In the case of budworm survey, when we get out beyond the generally infested area, attempting to keep track of just what is going on we may in 1 year find one or two trees to the acre showing signs of heavy feeding. The next year, if that has increased appreciably we can anticipate that trouble is coming.

But if the number of trees remains at a low level, we can figure that a biological balance exists between the budworm and its natural enemies.

In applying insecticides for forest pest control, it has only been since 1946 that we really have had what it takes to get into the inaccessible forested areas to do effective pest control.

AERIAL SPRAYING FOR CONTROL

The first aerial spraying of forested areas was conducted on the gypsy moth program in the Northeast in 1945. Since then the method has been used successfully against a number of different forest pests.

In general, spraying with aircraft has proved effective against defoliators, that is, those that eat the leaves from the trees.

When it comes to the bark beetles, we are confronted with a different proposition, and a much more costly one. The survey works all right after the tree has deteriorated to the point to show brown tops, but to determine which trees have to be treated takes a ground crew to look at nearly every tree within the area where the outbreak is in progress.

In the case of bark beetle outbreaks in mature timber, treating a single tree is a costly proposition.

OREGON'S PARTICIPATION IN FOREST PEST CONTROL

Senator CORDON. May I ask you whether the State of Oregon and the private owners, through their various organizations, are again contributing or offering contributions, cooperated contributions, for this work?

Dr. POPHAM. Senator Cordon, Oregon has set a pattern that is going to be difficult for other States to meet in forest pest control. Of course, the State is conservation-minded. High value timber is at stake; they have a good organization, and State official and private timber owners have cooperated 100 percent in this undertaking. They are continuing this year on the same basis as in the past 2 years; which means that the State takes care of its own land, the Federal Government takes care of its land, the private owners participate to the extent of 37½ percent on their lands against 25 percent from the Federal Government and 37½ percent from the State.

Senator CORDON. I am glad to hear that. When I was home last fall I made inquiries as to the progress of the work, and I found both public officials and the Forestry Division of the State and representatives of the private owners in their organizations enthusiastic over the results of the work up to that time.

And, as you know, we then had 2 years of very, very intensive work and 2 or 3 years prior to that where it was more or less sporadic.

Dr. POPHAM. We are quite encouraged over the outlook of the budworm program in Oregon.

Mr. Cliff is here representing the Forest Service and Mr. Shanklin is representing the Department of the Interior. I would like Mr. Cliff to present more in detail the status of that work.

Senator CORDON. We would appreciate that.

SPRUCE BUDWORM PROJECT IN OREGON

Mr. CLIFF. The spruce budworm project in Oregon was started in 1949 as a cooperative job. This year we are asking for $400,000 to continue that work. We feel that the 1953 fiscal year program should wind it up.

The 1952 appropriation will be available for work this spring. That spraying will be done during the month of June. We have $700,000 Federal money available for the spruce budworm control work. The State and private contributions will amount to $168,000 this spring.

The work which we propose to do in fiscal year 1953 will be the concluding phases of this project. To date, the epidemic has been successfully controlled on over two million acres in all ownerships, thereby protecting very important timber values in some of the most heavily timbered areas and most valuable stands that we have in the United States.

Senator CORDON. May I ask you: How widely was the infestation dispersed over the timbered area of the State? I know the main infestation was near Mount Hood, but I do not know whether it appeared elsewhere over the State.

Mr. CLIFF. Oh, yes. It appeared quite widely on the western slope of the State, and we also had done considerable control work in the Blue Mountain area.

Senator YOUNG. How do you spray these trees by plane?

Mr. CLIFF. This is airplane spraying.

Senator YOUNG. What percentage of kill do you get on one spraying? Do you have to spray more than once?

Mr. CLIFF. One spraying is usually effective. If it is applied at the time the budworm is in the caterpillar stage, the spraying is rather effective, once over.

Senator YOUNG. What percentage of kill do you get in one spraying?

Mr. MELICHAR. We find the kill runs as high as 90 or 95 percent. Normally we get between 85 and 90 percent kill or reduction in insect population. We can keep that status quo for a period of years, depending on climatic factors, and so on. But that should hold us for 10 or 15 or more years, we think, if everything is favorable.

Senator YOUNG. If it should rain after you do the spraying, does that nullify your work so that you have to do it again?

Mr. MELICHAR. No; it does not.

Senator YOUNG. Does it remain effective even though it rains?

Mr. MELICHAR. DDT is mixed with oil, and as the spray mixture comes in contract with the larvae it does the damage. The spray is applied at the time the larvae are active and exposed to the spray. So we don't have to wait for an interval from the time the spray hits the foliage and the larvae eat the foliage.

Senator CORDON. You do not spray the leaves with the idea of poisoning these insects, but it is applied on the bodies of the insects themselves; is that right?

Mr. MELICHAR. It is the contact; yes.

Senator YOUNG. That is more effective than an application where you have to wait until they eat the leaves.

Dr. POPHAM. With the new Aldrin spray, it works very much the same way with grasshoppers; it is both a contact and a stomach poison.

EFFECT OF HOUSE COMMITTEE ACTION

Senator HAYDEN. I have a copy here of the report of the House Committee on Appropriations as they reported it yesterday, and this is what the report says about your appropriation:

The committee recommends a total of $6,550,000 for 1953, $3,250,000 for the Forest Pest Control Act, and $3,300,000 for white pine blister rust. The funds approved cover (1) the completion of the spruce budworm project in Oregon and Washington, (2) an increase for the Engleman spruce bark bettle control project in Colorado, (3) the continuation of a number of projects which have been in existence for several years or more, and (4) the initiation of several new projects in the Northwest. The committee feels, however, that no new program should be undertaken until complete cooperation and matching funds have been agreed to by the State and local interests concerned.

Despite the work of the Bureau of Entomology and Plant Quarantine in reorganizing and streamlining its activities, information received by the committee indicates that far too large a proportion of this appropriation is being used for administration, supervision, and leadership. It is requested that a report be submitted to the committee reflecting these costs for the past several years.

The budget estimate was 8 million dollars and there is a reduction of $1,450,000; is that right?

Dr. POPHAM. Yes.

Senator HAYDEN. What comment have you to make on the House committee's report?

Dr. POPHAM. We have not had a chance to study the House report in detail, but it suggests that the money will be available to complete the spruce budworm project in Oregon and the spruce bark beetle job in Colorado. They use the word "complete" when referring to the budworm program in Oregon. We hope that is true, and we think, to the best of our knowledge now, that the appropriation for 1953 will complete the work in Oregon, unless there is a little mopping up to do on outlying infestations the following year.

Senator HAYDEN. I have heard that comment made a lot of times about these bugs, but they are very hard to complete.

Dr. POPHAM. We are rather confident that the 1953 program will do that. If there are expenditures beyond that, the amount would be greatly reduced below the $400,000 that is recommended for this year.

Provision has been made, according to estimates, for the Colorado spruce beetle job. We are very hopeful that the work this year on that program will reduce infestation to a maintenance or a clean-up basis.

Senator HAYDEN. Are you going at it in the same way that was reported to us last year and the year before and the year before that, or have you improved your technique?

Dr. POPHAM. There has been some improvement in techniques, but it still is a matter of treating each tree that is struck by the bugs. We have found no way that we can apply an insecticide against bark beetles effectively, except with ground equipment.

Senator HAYDEN. Would that be your 2-year cycle?

Dr. POPHAM. Yes, sir.

The difference in the amount of the budget estimate and the amount allowed by the House would have to be taken out of other projects that we feel should have attention this year. To say which one at this time would be difficult. We would want to see what develops in these areas this spring; where the greatest damage is likely to occur, and to use the money that is made available to the best advantage.

Senator HAYDEN. You are kind of standing by like a fire department, are you?

Dr. POPHAM. Yes, sir.

I am afraid that with that amount of reduction we are going to have some programs that will have to be deferred another year. Sometimes that can mean quite an extension in the area needing treating, and consequent increase in costs of control and damages sustained in the intervening period.

Mr. CLIFF. I would like to make an additional statement, if I may, about the Oregon spruce budworm project, since we got onto that.

This spring we expect to spray around 640,000 acres with fiscal year 1952 money. Of that 470,000 will be Federal; 162,000 would be private, and 8,000 would be State and county.

This project has been outstanding because of the cooperation that we have had from all of these different owners.

1953 WORK ON OREGON SPRUCE BUDWORM IN NATIONAL FORESTS

The work to be done in fiscal year 1953 will be largely on the national forests. After this spring's activities, we expect that there will be about 300,000 acres remaining to be treated. That treatment will cost about $400,000, which is the amount requested this year.

Senator CORDON. May I interrupt you to ask whether any of the work will be on the timbered areas of either the Warm Springs Indian Reservation or the Klamath Indian Reservation?

Mr. MELICHAR. Yes, sir; there will be an area on the Warm Springs that will be treated this year, definitely.

I can give you the acreage on that, if you wish. That is, 40,000 acres of Indian lands.

Senator CORDON. Thank you.

TIMBER SAVED PAYS FOR COSTS OF INSECT CONTROL

Senator HAYDEN. Is this a paying proposition? That is, if you save the trees, will the Government get its money back from the timber value later?

Mr. CLIFF. I am sure that is true, Senator. The Douglas fir trees we are spraying in that area are among the most valuable timber stands that we have. If we allow the epidemic to go unchecked, the losses of timber on over 2½ million acres, could be tremendous.

Senator HAYDEN. I asked the question because the argument has been made in other instances that the timber was not worth saving; that it did not have a value.

You say it has a real value here.

Mr. CLIFF. I am sure that you appreciate the value of these trees also for watershed protection and for other purposes besides timber.

Even though some of the stands are not accessible now because of lack of road facilities, they do have real value for watershed purposes, for recreation and potential value for timber production.

Senator CORDON. Very little of the timber area in Oregon today is inaccessible.

Mr. CLIFF. There is quite a bit that is not accessible by logging roads yet, Senator, but there is very little that is not operable and can be harvested when we get roads into them.

Senator CORDON. The whole Warm Springs Reservation is accessible.

Mr. MELICHAR. I might point out we did spray in the vicinity of Roseburg, Eugene, and the Willamette Forest on the west side of the Cascade, primarily for Douglas fir, where the values were extremely high.

Senator CORDON. That timber in there, I suppose, now will average, when it is sold, better than $20 a thousand on the stump.

Mr. CLIFF. That is correct.

Senator CORDON. It will not take much of that to pay back all the money that is expended on budworm control.

Mr. CLIFF. The total amount obligated or spent to date on this project has been about $1,846,000. The total amount for complete control would be about $2,930,000, and we feel that that will conclude this particular program.

CHEMICAL CONTROL OF FOREST PESTS

Dr. POPHAM. There is a point, Mr. Chairman, that I think it would be well to bring out in connection with chemical control of forest pests.

We feel that any type of artificial control is an emergency measure, that eventually, as improved forestry practices are adopted, that the forests will be made less susceptible to insect outbreaks.

But, in the meantime, we have tremendous values in areas where this timber has been growing for 80 to 100 years or more, and it may be within 5 or 10 years of harvest and, of course, if bugs come in and kill that timber, the values are destroyed and the risk of fire greatly increased.

The point I wanted to make, however, is that all of these control programs are closely integrated with management plans. We are always looking to the time when the forest will be on the basis of being much less susceptible to bug outbreak than is now the case in many parts of the country.

If you would care to review some of the other individual projects that are proposed under this appropriation, Mr. Cliff, of the Forest Service would be glad to discuss them. It happens that these programs all involve Federal lands. Mr. Cliff represents the Forest Service and Mr. Shanklin represents the Department of the Interior.

Senator HAYDEN. Do you think it is necessary, Senator Cordon, to do that for this record?

Senator CORDON. I would have said yes, Mr. Chairman, were it not for the fact that the House action here indicates that the members of the committee over there, after further consideration, have revised their own views in this field.

Senator HAYDEN. I was pleased to see that.

Senator CORDON. And unless there is some special reason why these gentlemen should want to present it, something they might know after having appeared before the subcommittee, I would not think it would be necessary.

HOUSE COMMITTEE REDUCTION OF 1953 ESTIMATES

Mr. CLIFF. There is just this: the budget allowance for this forest insect control job was $4 million. That is exclusive of the white pine blister rust.

The House approved a total of $3,250,000, or a cut of $750,000, which will eliminate some projects which we feel are quite vital.

If the committee desires, we would like to discuss some of those projects with you briefly.

Senator CORDON. May I ask, then, if you think we ought to go into it from the standpoint of the reductions made? What is the fact as to the $3,300,000 for the white pine blister rust? Is that the full amount requested, or less?

Mr. CLIFF. No. The white pine blister rust request was $4,000,000 also, and that was cut $700,000 to $3,300,000.

Senator CORDON. I understood you to say, in answer to Senator Hayden a while ago, that at the present time you were really not in a position to say what you would have to do as a result of a reduction if it is held at this point.

Mr. CLIFF. If this reduction sticks, then we will have to review some of the projects that we proposed for control next year and try to place our shots where they will do the most good. It will mean that some of them will just go unattended.

Senator CORDON. All right, let us take the language of the committee and see how far you agree with it. The language is:

> The funds approved cover (1) the completion of the spruce budworm project in Oregon and Washington * * *

You have answered that, and you said you think it will.

Mr. CLIFF. That is correct.

Senator CORDON. But until you get the year's work in, you cannot know.

Then as No. 2:

> An increase for the Englemann spruce beetle control project in Colorado.

Evidently, you have a breakdown with an indication of the amount that you expected to use there, and this year it is greater than it was last year; is that correct?

Mr. CLIFF. The approval of that program by the House will enable us to give that project what we think will be the knock-out blow this year. We have had control work there for 2 years.

The outlook for control looks very favorable because we had a combination of circumstances which has greatly reduced that beetle epidemic. The control work that was done in 1950 and 1951 was very effective. Then a year ago we had a heavy winter freeze which further reduced the insect population. That, combined with heavy woodpecker work in some areas, has put the project in a position where we now are quite confident that we can complete the work on it for less than half of the total amount that we thought it would cost a year ago.

The outlook is extremely promising and we are very well pleased at the House action on this particular item.

Senator CORDON. Then within this amount, if I understand you correctly, you can go forward with your planned work in Colorado also; is that right?

COLORADO PROJECT TO BE CONTINUED

Mr. CLIFF. On the Colorado project, yes.

Senator CORDON. To the full extent.

Mr. CLIFF. Yes. We have sufficient funds left from the 1952 appropriation to get a full-scale start just as soon as the snow leaves this spring. As a matter of fact, there may be as much as $100,000 left over at the end of this present fiscal year. We got such a late start last fall, due to the lateness of passage of the appropriation act, that we were unable to do as much of the work as we would like to have done last fall. As a result, we have enough money on hand to get the program well under way this spring and there will be some unspent at the end of fiscal year 1952. I think the committee should know this, too, we expect to treat about 400,000 trees in the Colorado project this coming summer. In the calendar year 1953 there will be some mop-up work left, probably 50,000 trees.

Then there will have to be some clear up—picking up the tag ends—for a year or two thereafter.

We feel quite confident that the money that the House committee approved will enable us to go ahead on an adequate scale to get on top of this very devastating epidemic.

Senator CORDON. The language then goes on:

3. The continuation of a number of projects which have been in existence for several years or more * * *

The language would indicate that you will have money to continue a number of them, but not all of them. What is the fact?

OTHER PROJECTS AFFECTED BY HOUSE COMMITTEE REPORT

Mr. CLIFF. The fact is that we can continue with several projects that have been underway for several years. But the Budget estimates provided for several new projects, which pose very serious threats.

Senator CORDON. Let us stay on the ones that have been in existence for several years or more. Can you continue all of those with this money?

The language would indicate that you could not.

Mr. CLIFF. Yes, we could. But, I think, Senator, we would want to weigh the need on those against the need on some of these new ones that are coming up.

Senator CORDON. Then they say that it would also permit the initiation of several new projects. That clearly means that there would be some that you had planned on working on, that you could not do within the amount that they recommended on the outside.

MOUNTAIN PINE BEETLE IN IDAHO

Mr. CLIFF. One of the new projects that we would be concerned with is the mountain pine beetle on white pine in the northern Idaho national forests.

Senator CORDON. Have you not been working in the white pine heretofore?

Mr. CLIFF. We have done some work in years past. Nothing has been done there for 4 or 5 years and we are getting build-ups in some of those valuable white pine stands in north Idaho which pose rather serious threats. We have a large area of virgin white pine up there and we are getting epidemic spots in these pine forests which, if they spread and get out of control, can threaten that valuable forest. We are hoping that we can get in there and fight those spots.

INTEREST OF LOCAL PEOPLE

Senator YOUNG. Are the local people there interested to the extent that they are putting up sizable matching funds? If this is the case, what are the matching funds?

Mr. CLIFF. Yes. I am sure we could get matching funds from the private owners of white pine timber, where it is intermingled or adjacent.

Senator YOUNG. How much from the State?

Mr. MELICHAR. I might point out that the work we contemplate here is on national forest lands. There is one area that involves considerable State lands, but it is in such shape, being inaccessible at this time and so on, that there is no thought of doing control work in that area. So our estimate here is directed to Federal lands only.

Senator YOUNG. You mentioned private lands. What have they offered in the way of assistance? What interest have the private owners shown in this work?

Dr. POPHAM. They have not shown interest in control, Senator, to the point of putting up money. There is some infestation on the private lands which may become serious.

The more serious spots for which the money was requested are on lands of the Forest Service.

Senator YOUNG. Are the local interests concerned about the spread from the national forests to privately owned forests?

Dr. POPHAM. They are quite concerned about that.

Senator CORDON. What about the reverse?

Dr. POPHAM. This infestation showed up first on Forest Service lands. There are some private lands that have enough trees in there now to indicate that they may be heading for trouble.

These bark beetle programs are difficult things to anticipate. You understand that the beetle is there always. It is a matter of some change in ecological conditions, maturity of the tree or drought, or what not; something that weakens them which brings on outbreaks.

Senator CORDON. Environment.

Dr. POPHAM. Yes.

Something happens to favor the bug particularly, and we begin to get a build-up. Such a build-up may be watched for one season or even for two seasons. If the increase is slow, we may still wait in

hopes that adverse conditions during the winter may level the population back to normal.

But if you get an increase annually over a period of 2 or 3 years, then it becomes obvious that something had better be done before it explodes into a major outbreak.

Senator CORDON. The beetles can be present in the forest and not do enough damage to be of any consequence; is that not right?

Dr. POPHAM. That is right.

Senator HAYDEN. But they are always there, are they?

Dr. POPHAM. Yes, sir.

Senator CORDON. It might be that the same thing is true of the beetles as the old saying goes about dogs, that a certain number of fleas are good for a dog.

ADVERSE WEATHER AFFECTS INSECT POPULATIONS

Mr. CLIFF. In the white pine area, one of the things that happened to step it up was a blow-down in 1949 which produced a condition favorable for the multiplication of the beetle. We have salvaged a good part of that blow-down, about 20 million feet, but we have not been able to salvage all of it. That blow-down produced really favorable breeding conditions for the beetles and has been one of the factors which has caused an upsurge. This is an area where much of the timber is inaccessible. There are few roads in those stands yet.

We have these concentration areas which might be likened to spot fires, and we feel that, in the long run, it probably would cost less and save more timber if we got in and stopped those spots now before they do get into a blow-up stage.

CURRENT OUTLOOK SERIOUS

Senator CORDON. Do you feel that the showing you made in the last year or two in those areas, of increased activity among the beetles has reached a point now where it is noticed that something must be done, otherwise there will be a very real infestation and loss of timber?

Mr. CLIFF. That is our belief, Senator.

Senator CORDON. And the infestation, if I understand you, is entirely in national forest timber only; is that right?

Mr. CLIFF. Practically all of it, although there is some on private lands, particularly in the Floodwood Creek Basin, on the Clearwater drainage.

Senator CORDON. Do you intend to work in there?

Mr. CLIFF. That contains a minor acreage of Federal lands and the private owners plan to liquidate that timber just as fast as they can to keep from losing it to the beetles.

Mr. MELICHAR. We attempted to develop a cooperative undertaking, and after meeting with the interests there, they decided to step up their rate of liquidation rather than to undertake control. That disposed of that particular area there.

Senator CORDON. What is the fact as to whether the land denuded of commercial timber would ordinarily have a regrowth of pine in that area?

Dr. POPHAM. We expect a regrowth of white pine in that area; yes, sir.

Senator CORDON. What is the fact, then, as to the extent to which private owners in that section, having cut off their timber, keep up their taxes and hold their covers of land in private ownership?

Mr. MELICHAR. With regard to the mountain pine beetle attacks on white pine one of its characteristics is that it attacks primarily overmatured timber, and a timber stand in a healthy condition is not subject to these epidemic flare-ups, except in windthrown timber.

If we were in a position to carry on what we call sanitation and poor risk cutting in all of our areas, we could get on top of this problem in that manner.

So that the people that own these lands, in cutting them over subsequently find themselves with a young growth which is not susceptible to this insect attack.

Mr. CLIFF. It seems that our work is never done, though, because in order to produce a white pine stand, you have to control the blister rust.

This is one of the most productive white pine areas in the United States; it is the largest body of mature white pine in the United States.

WORK PLANNED ON GOVERNMENT LAND

Senator CORDON. Inasmuch as the work that you are going to do, if I understand you correctly, is wholly on national forest lands—that is correct, is it not, in that area?

Mr. CLIFF. On this particular project, yes.

Senator CORDON. There would be no basis for any cooperative effort, then, would there? That is the job of the Government on its own lands?

Mr. CLIFF. We feel that is the Government's responsibility.

Senator CORDON. Even in my own State where, as you say, the private interests are perhaps a lot further ahead in many respects in their cooperative effort, even there you would expect to do that work wholly at the expense of the Government, would you not?

Mr. CLIFF. That is right.

Senator CORDON. So there is no reason why it should not be done in Idaho in this instance.

Mr. CLIFF. Yes.

Mr. MELICHAR. I might point out, Senator, that in this same general territory we have a cooperative program which involves the State of Montana, the Anaconda Copper people, the Northern Pacific, and the Federal Government. That was a coordinated program, in that same general territory.

Senator CORDON. I am glad to hear that.

WESTERN MONTANA PROJECT AFFECTED BY HOUSE COMMITTEE ACTION

Mr. CLIFF. Another new project which might be involved in this cut, if it stands, would be the spruce budworm on Douglas fir and white fir in western Montana. That project is described on page 270 of the book of notes. For that project we requested $221,900 to initiate control on a rather widespread epidemic that involves five national forests.

There, again, we would treat only the most severely attacked parts of the forest. The occurrence of the epidemic is rather spotted.

The spruce budworm has been in those forests for several decades, but it has been going along on a rather even keel without doing too much damage, until now.

The spruce budworm is an insect where, if it is in the forests in just light or moderate amounts, it retards timber growth, but does not necessarily kill the trees. When it gets into an epidemic condition, it starts defoliating the trees to such an extent that it kills them outright. We are getting spots now, rather large ones, where we are getting heavy mortality of trees and it is on these spots that we want to do the control work. They can be rather easily detected from the air, and we feel that it is quite essential to do control work on about 148,000 acres.

Senator CORDON. It costs about $1.50 an acre; is that right?

Mr. CLIFF. Yes, sir; approximately $1.50 an acre.

Senator CORDON. I note your statement that this work will be done in Douglas fir stumpage. The values are averaging $4 to $10 per thousand board feet. Is that a fairly heavy growth of timber in that area? How much accrues to the forester or to the agent?

Mr. CLIFF. It does not compare to the stands in western Oregon. Probably 20,000 board feet per acre would be a good average figure for many of those Douglas fir stands in Montana; fifteen to twenty thousand.

Our Oregon stands run several times that.

INSECT CONTROL COSTS IN RELATION TO VALUES

Senator CORDON. You spend $1.50 to save $80 there; is that right?

Mr. CLIFF. If you think only of the timber that you are spraying, that is right. But the idea of these fights against the bugs is not just to save the timber that they are now eating but to keep them from spreading into additional timber.

Senator CORDON. It would be a pretty fair investment to save what is on the ground now; is that not right?

SPRUCE BUDWORM AFFECTS CHRISTMAS TREES

Mr. MELICHAR. We have in addition to that a very active Christmas tree market in that section of the country. The spruce budworm attacks the ends of the branches, thereby deforming the trees and making the trees unsuitable for Christmas trees. That market is extremely large. We ship better than 1 million trees a year from all lands out of that section of the country. The Federal lands ship about 750,000 to 800,000 trees per year.

Senator CORDON. Are those Christmas trees cut under proper direction, so as not to cut too much into regrowth?

Mr. MELICHAR. Yes.

Senator CORDON. They are taken out as a thinning operation, are they?

Mr. MELICHAR. They are selectively chosen so as not to denude the lands; that is correct.

DOUGLAS FIR BEETLE IN NORTHERN IDAHO

Mr. CLIFF. Another new project, which is a smaller project, is described on page 271 of the notes. It is the Douglas fir beetle on Douglas fir in the national forests of north Idaho.

The Douglas fir beetle is becoming more prevalent in certain localities in several of the forests there and has reached the point on parts of the St. Joe, Clearwater, and Coeur d'Alene National Forests, that we feel control work is desirable.

Senator CORDON. Is there a lot of that in my country?

Mr. CLIFF. Yes, sir. And just recently we have reports from Oregon that the blow-down that occurred in the coast range within the last year has caused some upsurge of the Douglas fir beetle. We are looking into that particular one right now to see how damaging it is and what needs to be done about it.

WHITE PINE BLISTER RUST CONTROL

Dr. POPHAM. Mr. Chairman, I would like to make just a brief statement on blister rust control, if I may.

Senator HAYDEN. Very well.

Dr. POPHAM. The budget estimate called for an increase of $700,000, to be spent on blister rust control in the Northwest.

On page 14 of the book of maps handed out yesterday, there s one which shows diagrammatically the status of blister rust cont ol in different parts of the country.

Blister rust, as you will recall, is an introduced disease. It got into the eastern part of the United States about 1912. It did not invade the western part of the country until about 1930.

With a program that has continued over a period of years, there has been a very substantial progress made in this work, to the extent, you will note, that in the eastern part of the United States there remains only 3 percent of the areas selected for control that have not had initial protection.

By initial protection we mean the amount of work needed to stop new infections. However, the work cannot stop there, for the reason that the seed from ribes, which are the alternate host plants for the rust, are in the ground, and there must be one, two, or in some cases three reworkings of areas in order to eliminate seedling bushes.

NORTHWEST IS CRITICAL AREA NEEDING TREATMENT

The critical area, however, and the one where we had hoped to expand work somewhat, is in the Northwest, where, you will note, that there is 37 percent of the pine in control areas that has not as yet received initial protection.

In some of that unworked area, the damage, that is, diseased trees that are either dead or will eventually die, has reached 25 to 27 percent of the stand.

With the progress that has been made in the east, we very shortly will have completed the initial phase of the program.

But the urgent need at this time is to get the initial protection completed in all areas. That is the reason why the department and

the President's budget has recommended this year that the work in the northwest be stepped up.

Senator HAYDEN. How does this rust travel from Wisconsin and Minnesota or Iowa out to the Pacific Coast?

Dr. POPHAM. The Pacific coast rust, Senator Hayden, was caused by a separate introduction. It came in through Vancouver, British Columbia, and spread from Canada into the United States. I believe that was some 15 years after the initial introduction in the East.

METHOD OF RUST SPREAD

To answer your question more specifically as to how it spreads from one area to another, it may be carried on nursery stock or young pine that became infected before being moved. It was spread rather widely throughout the eastern part of the States and into the Middle West in that manner before the quarantine became fully operative. Now that we do have quarantines that are recognized and supported by all States interested in protecting white pine there is very little spread from one area to another in this manner.

I would just like to emphasize one other point which I think sometimes is overlooked.

MOST CRITICAL AREAS SELECTED FOR TREATMENT

This is not an effort to eradicate all the ribes in the United States. That would be a very costly undertaking. In cooperation with the Forest Service, with the State conservation departments, and others, we have selected, over a period of time, about 27 million acres of the best white-pine sites in the country. Those have been thrown into what we call control areas. Now the effort is to protect that 27 million acres for future pine crops.

Once the stand is protected and the trees reach a certain age, the cost of maintenance from then on is very little. If those areas are logged on a selective basis so as to keep a reasonable amount of shade over the area, there is very little maintenance work required.

Our immediate objective, therefore is to achieve initial protection of unworked areas.

Senator CORDON. I notice in your map here you show all of western Oregon and Washington in red. There is not a great deal of white pine in that area, is there?

Dr. POPHAM. No. sir; there is not. Most of the white pine in Oregon is in the Klamath area.

Senator CORDON. And around the Medford area, in the southwest, along Sisters Rocks.

Dr. POPHAM. Yes, sir.

SUGAR PINE AFFECTED

Mr. CLIFF. The important tree that we are concerned with there, Senator, is the sugar pine. There is considerable sugar pine in southwestern Oregon.

Senator CORDON. I did not know that was classed as a white pine.

Mr. CLIFF. It is a five-needle pine, and the five-needle pines are all susceptible to white pine blister rust.

LAKE STATES AND NEW ENGLAND AFFECTED

Senator THYE. Mr. Chairman, I also notice that a great part of our timbered area in Minnesota comes under the red here on the map.

Dr. POPHAM. This map, Senator, is very diagramatic. In the Lake States area there are about 3½ million acres included in these controlled areas. Now, there is some 11 million acres in New England and about 3½ million acres in the Lake States, and the remainder is in the Northwest and the Pacific coast.

27 MILLION ACRES IN CONTROL AREAS

It adds up to about 27 million acres that are included in the control areas that we are trying to protect.

Senator CORDON. What about the areas that are not in the controled areas? Are we to understand that they are not in serious danger or that they are not of a great value and, therefore, you are protecting the best part first?

Dr. POPHAM. There are two or three important considerations. One is that some areas would be so difficult and costly to protect that, from the pure standpoint of economics, control is not feasible, even though the areas may now support good stands of pine.

There is a lot of white pine that is not within the control area. Some of it is marginal or on small scattered tracts where the perpetuation of pine is not considered a practical undertaking.

As improved management practices are adopted, and the productivity of forest lands increases, we believe that the areas that are now selected for control will assure white pine for the future somewhat beyond current demands.

Senator CORDON. In other words, you have to make your suit to fit your cloth. You just did not have enough money to do the whole job, so you did the best you could and went as far as you could get; is that about right?

Dr. POPHAM. That has entered in, but I imagine if there would have been more money there could have been more good pineland included in control areas.

Senator CORDON. That is what I say. You just could not find enough money to be allocated to do this job to do any more than cover the areas within which you have set up control operations.

Dr. POPHAM. That is right.

Senator HAYDEN. If there is nothing further, we thank you, gentlemen.

The next witness is Mr. Knox T. Hutchinson, Assistant Secretary of Agriculture, who will discuss with us flood control.

FLOOD CONTROL

SALARIES AND EXPENSES

STATEMENT OF KNOX T. HUTCHINSON, ASSISTANT SECRETARY OF AGRICULTURE, RALPH R. WILL, ADMINISTRATIVE OFFICER, OFFICE OF THE SECRETARY; ROBERT M. SALTER, CHIEF, SOIL CONSERVATION SERVICE; D. A. WILLIAMS, ASSISTANT CHIEF, SOIL CONSERVATION SERVICE; VERNE L. HARPER, ASSISTANT CHIEF, FOREST SERVICE; M. P. LEAMING, AGRICULTURIST, PRODUCTION AND MARKETING ADMINISTRATION; GORDON SALMOND, CHIEF, DIVISION OF WATERSHED MANAGEMENT, FOREST SERVICE; GEORGE R. PHILLIPS, FLOOD-CONTROL OPERATIONS OFFICER, OFFICE OF THE SECRETARY, AND RALPH S. ROBERTS, DIRECTOR OF FINANCE AND BUDGET OFFICER, DEPARTMENT OF AGRICULTURE

BUDGET SCHEDULE

(Schedules from the justifications follow:)

Flood control, Agriculture

Appropriation act, 1952	$6,372,800
Supplemental appropriation for 1952 (Second Supplemental Appropriation Act, 1952)	186,800
Base for 1953	6,559,600
Budget estimate, 1953	7,750,000
Increase (direct appropriation)	+1,190,400

NOTE.—Although an increased appropriation of $1,190,400 is requested for this item in 1953, it is estimated that there will be an increase of only $487,903 in total funds available due to the availability of prior year balances of $702,497 in the fiscal year 1952.

Summary of increases and decreases, 1953 (on the basis of available funds)

Decrease for preliminary examinations and surveys (flood control)	−$159,202
Increase for installation of works of improvement on authorized watersheds (flood control)	+446,698
Increase for general basin investigations in the Colorado River area	+200,000
Nominal increase in transfer to Office of the Secretary, rounding the amount to $25,000	+407

Project statement (reflecting available funds)

Project	1951	1952 (estimated)	Increase (+) or decrease (−)	1953 (estimated)
1. Preliminary examinations and surveys (flood control)	$1,812,685	$1,859,202	−159,202	$1,700,000
2. Works of improvement (flood control)	6,644,393	5,109,842	+446,698	5,556,540
3. General basin investigations	----------	250,000	+200,000	450,000
Transferred to—				
"Salaries and expenses, Office of the Secretary of Agriculture"	25,000	24,593	+407	25,000
"Salaries and expenses, Office of the Solicitor, Department of Agriculture"	17,000	18,460	----------	18,460
Total pay-adjustment costs	----------	[369,389]	[+20,968]	[390,357]
Total available or estimate	8,499,078	7,262,097	+487,903	7,750,000
Transfer in 1952 estimates to General Services Administration	+2,200	----------		
Prior-year balance available in 1951	−3,088,775	----------		
1951 balance available in 1952	+702,497	−702,497		
Reduction pursuant to sec. 1214	+4,200,000	----------		
Total appropriation or estimate	10,315,000	6,559,600		

HOUSE COMMITTEE REPORT

Senator HAYDEN. Mr. Hutchinson, I have before me the report of the House Committee on the Agricultural Appropriations for 1953. I will read the last paragraph of what they say about flood control, which appears on page 10 of the report:

In view of the tragedy in the Kansas-Missouri area last summer and in view of the tremendous annual loss of topsoil of this Nation through runoff and water flow, the committee feels that it is imperative that the full budget estimate be approved.

So there is nothing in the nature of an appeal here today, but we would like to have the action of the House noted.

Mr. HUTCHINSON. In a certain sense, Mr. Chairman.

If we may be permitted, Mr. Will, from the Secretary's office, who has the major responsibility in this field of flood control, has a very short statement, which I would like to have him present first.

Then we would like to discuss with the committee, with your permission, the placement of the total funds to which you referred, on which we do not quite agree with the committee, and we think we have very good reasons for that.

Senator HAYDEN. Then let us proceed with the statement. Do you want to read your entire statement, or just to highlight it?

Mr. WILL. Mr. Chairman, we can do just as you prefer. It is a statement of 4½ pages, and in the interest of saving time, if you prefer, I can excerpt it and file the entire statement for the record, with your permission.

Senator HAYDEN. Very well.

(The statement referred to follows:)

FLOOD CONTROL BUDGET ESTIMATE, FISCAL YEAR 1953—STATEMENT BY RALPH R. WILL, ADMINISTRATIVE OFFICER, OFFICE OF THE SECRETARY, BEFORE THE SENATE SUBCOMMITTEE ON AGRICULTURAL APPROPRIATIONS

This year the flood-control item contains estimates for (1) carrying on preliminary examinations and surveys and for (2) installing works of improvement on authorized watersheds under the flood-control acts. It also contains estimates for (3) general basin investigations—the preparation of the agricultural phases of resource-development programs for the Arkansas-White-Red River, the Colorado River, and the New England-New York areas in cooperation with other Federal, State, and local agencies.

PRELIMINARY EXAMINATIONS AND SURVEYS

Since the war 23 watershed-survey reports under the flood-control acts have been completed. Ten of these have been transmitted to the Congress for consideration. Three others are in process of transmittal to the Congress. An additional 10 others are in process of review by the governors of concerned States and by other departments and agencies of the Federal Government.

At this time 25 more surveys are sufficiently advanced so it appears that reports on them will be completed this fiscal year. Included in this latter category are a number of small watersheds within the Missouri River and upper Mississippi River areas where survey work is being undertaken with funds provided in the Second Supplemental Appropriation Act for this fiscal year. Other field surveys are also under way in the Arkansas-White-Red River area, the Columbia River area, the Colorado River area and in the New England-New York area and in a number of other smaller watersheds in various parts of the country.

These reports (excluding the one on the Missouri River area) cover approximately 20 percent of the country in 38 States and represent about 22 percent of the watersheds which this Department has been authorized and directed to investigate. A large part of the survey job is still ahead of us.

A special effort is needed to bring the watershed survey work of this Department abreast of the complementary river and waterway survey work of the Corps of Engineers so that the runoff and water flow retardation and soil erosion prevention measures for which this Department has responsibility and the flood-control works of the Corps of Engineers may be installed on a balanced basis for the benefit of all the people in the various river basins of the country.

The watershed survey report phase of the total job in a river basin sets forth the program for adjustments in land use and the installation of conservation and revegetation measures and supplementary gully control and sediment and water-flow retardation measure and structures. These are the coordinated measures which aid the processes of nature in increasing the rates and amounts of infiltration and storage of water in the soil, in retarding destructive surface runoff and waterflow, and in preventing erosion and downstream movement of sediment. They are installed by landowners and operators and by this Department and other public agencies.

Fortunately such programs of watershed-improvement measures, when installed and maintained, not only help to stabilize watersheds and prevent floods but also yield substantial benefits in the form of increased production and higher quality cultivated crops, forage and timber, together with more uniform yields as a result of conserved water and plant food. At times these latter benefits tend to overshadow the basic runoff retardation and erosion prevention features.

However, it is the basic watershed-stabilization features which protect the productive resource base upon which our Nation must depend for its food, feed, and fiber production and which set the stage for favorable economic and production conditions.

The budget request for preliminary examinations and surveys in the fiscal year 1953 is some $159,202 less than the amount available for the current year. The Department plans to make the most effective use of trained field technicians whose services are still available to us by concentrating on surveys now under way. Assistance and information will be provided, as requested, to the Missouri Basin Survey Commission, established by Executive Order No. 10318. Such additional data as are needed and it is feasible to obtain will also be provided to the extent that available resources permit.

WORKS OF IMPROVEMENT

Benefits from run-off and waterflow retardation and soil erosion prevention measures installed on the 11 watersheds, for which programs of work are now authorized, consist largely of prevention of floodwater and sediment damage to productive agricultural lands, crops, livestock and improvements above the flood control works constructed by the Corps of Engineers and other agencies on the rivers and other waterways. They also include the maintenance and improvement of soil fertility and productive capacity of the watershed lands and the protection of downstream reservoirs and other works from sedimentation.

Installation of improvement measures on the 11 authorized watersheds is continuing although it is substantially behind the schedules contemplated under the survey reports. Each year that untreated watershed lands are allowed to continue to erode makes the treatment job more difficult and expensive. The amount requested for works of improvement in the fiscal year 1953 is some $446,698 more than is available this year.

EXAMPLE OF WATERSHED IMPROVEMENT WORK

An example of the watershed improvement work being carried on is that in northern Mississippi. The fertile upland soils of the Little Tallahatchie and Yazoo River watersheds are subject to excessive erosion when exposed. The original forest cover prevented most erosion but, with clearing and production of cotton as the predominant crop, the soil was left uncovered for much of the year. In consequence, some stream channels are completely filled with the eroded material and the capacity of the upland soils to absorb the rains has been reduced. Conditions are so severe in some places, that less than an inch of rain may cause damaging flooding.

The Department's watershed survey revealed that 88 percent of the first bottomlands in the Little Tallahatchie drainage basin have been damaged to some extent by sedimentation. Tremendous volumes of sand are contributed to the Yazoo Delta by meandering and head-cutting tributary water courses.

The Department's watershed improvement program for these watersheds is designed to bring about use of the watershed lands in accordance with their capabilities; to protect the area from fire; to reestablish permanent cover of trees, Kudzu or other plants on the steeper slopes; to stabilize gullies, roadsides, and stream banks; to improve channels above the area of Army responsibility and so reduce overflow; to reduce movement of sediment downstream into reservoirs or onto fertile bottom lands; and to install conservation and good management practices on crop, pasture, and forest lands in cooperation with landowners and operators and State and local units of government.

This work is being carried on largely on a subwatershed basis. Typical of these is the steep Taylor-Jones Creek subwatershed of some 12,000 acres. That area had been cleared for cotton and corn 20 to 40 years ago. Intensive clean cultivation resulted in severe gullying and subsequent filling of stream channels and destruction of fertile bottom lands by flooding, deposition of infertile sediment and swamping. The productive capacity of the limited amount of bottom lands, and upon which farmers in the locality depend for cash crops, was greatly reduced.

Now more than 95 percent of the farm owners within the subwatershed are cooperating with the local soil conservation district, which is receiving assistance from the Department under the flood-control program, and have installed many needed improvement measures.

These improvements have been highly effective in preventing further amounts of sand and sediment from reaching the channels. The sediment-free runoff water has started opening up the old channels by scouring action. By now they are deep and wide enough to carry the runoff water with less than half the former overflow. Crop production has almost doubled on land previously subject to periodic flooding. Many farmers who had been unable to depend upon annual crops from their flood plain lands are now successfully farming them.

As this sort of stabilization and restoration to use of watershed and bottomlands progresses, the cumulative benefits will be felt both on the farms and in the rural communities. Local farmers, bankers, and businessmen are enthusiastic about the work and the way it is handled. Those concerned contribute to its installation and maintenance and the general public's interest is represented by the Department's participation.

TEST OF WATERSHED IMPROVEMENT INSTALLATIONS

There has been a recent test of the effectiveness of watershed improvements installed under the flood-control program on the watershed of the Los Angeles River in California.

The storms of January 15 and 17 caused serious flooding in portions of that watershed. These storms were of comparable intensity to the severe ones which occurred in January 1943 and March 1938.

Approximately 2.6 inches of rainfall had been recorded in the San Fernando Valley portion of the watershed within the few days immediately prior to the flood period. Rainfall at Van Nuys, within the area of most severe runoff and damage, for the period of January 15–17 was about 8.4 inches.

An evaluation was made, immediately after the storm, of the benefits from prevention of floodwater and sediment damage to the areas protected by cooperatively installed watershed improvements and damages were estimated in the areas not protected by watershed improvement measures.

The watershed-improvement program on the land performed exceedingly well under severe conditions. Soil losses were negligible on protected cropland in contrast with erosion rates up to 100 tons per acre on clean cultivated land. It was estimated that measures installed on one group of four subwatersheds prevented damages in the amount of $200,000 to agricultural land and other property and that similar works of improvement installed on another group of four subwatersheds prevented an estimated $100,000 additional similar damage.

Floodwater and sediment damages to the areas in the San Fernando Valley not yet protected by watershed improvement installations amounted to an estimated $731,750. These damages included damages to crops, dwellings, business establishments, streets, roads, bridges, and personal property.

In addition to the evaluated losses, five lives were lost in this area and a serious health hazard was created by overflow of cesspools.

A list of the principal works of improvement completed in the fiscal year 1951 is included in the House Notes.

GENERAL BASIN INVESTIGATIONS

In the Colorado River area there is an urgent need to prepare a program on a comprehensive and multiple-purpose basis for the development, use, and conservation of the watershed lands. This Department has been aware of the need for such a program for a number of years as the watershed land problems have progressively become more pressing and acute.

Within the last 3 years the Congress has ratified the interstate compact entered into between the States of the Upper Colorado River Basin. This compact has provided for the division and regulation of the waters of the upper basin of the Colorado. In order to provide the physical structures necessary to carry out the terms of the compact and to permit the full utilization of the waters of the Colorado River, the Department of the Interior has recently been engaged in developing a complete engineering plan for ultimate installation on the river. In accordance with Federal Interagency River Basin Committee procedure the Department of the Interior has advised us of the nature of these river development plans. They call for the installation of an extensive system of structures on the main stem of the river. The preparation of these plans by the Department of the Interior emphasizes and makes imminent the need for a multiple-purpose, complementary program for the proper use and conservation treatment of the watershed lands of the basin. The study should get under way immediately to determine just what can be done as a basis for field operations. Deterioration of the middle mountain watersheds of the Colorado River has caused extensive mountain valley entrenchment. This process has poised much material that may quickly move down into the main channel of the river at an increasing rate. Even now, during a comparatively dry rainfall cycle in the Colorado Basin, sediment is being carried into the headwaters of Lake Mead at the substantial average rate of more than 100,000 acre-feet per year. The sooner the rate of movement of soil from watershed lands into the river is reduced, the longer will be the useful life of present and future main stream reservoirs. To initiate a study of these watershed lands, an estimate of $200,000 is proposed for 1953.

Progress is being made on development of a comprehensive agricultural program for use of the land and water resources of the Columbia River Basin. According to the work schedule previously supplied the committee, this activity will continue during fiscal year 1953.

WATERSHED SURVEYS

Mr. WILL. I do want to point out that we are making substantial progress in bringing this watershed and river-basin program forward to where we think it belongs. In the past year we have made very substantial progress in bringing our studies to stages of completion on new physical areas.

I will just read an excerpt from the statement which I filed for the record, on that point:

Since the war 23 watershed-survey reports under the Flood Control Acts have been completed. Ten of these have been transmitted to the Congress for consideration. Three others are in process of transmittal to the Congress. An additional 10 others are in process of review by the governors of concerned States and by other departments and agencies of the Federal Government.

At this time 25 more surveys are sufficiently advanced so it appears that reports on them will be completed this fiscal year. Included in this latter category are a number of small watersheds within the Missouri River and Upper Mississippi River areas where survey work is being undertaken with funds provided in the second supplemental appropriation act for this fiscal year. Other field surveys are also under way in the Arkansas-White-Red River area, the Columbia River area, the Colorado River area, and in the New England-New York area and in a number of other smaller watersheds in various parts of the country.

These reports (excluding the one on the Missouri River areas) cover approximately 20 percent of the country in 38 States and represent about 22 percent of the watersheds which this Department has been authorized and directed to investigate. A large part of the survey job is still ahead of us.

Mr. Chairman, further, I would like to mention that in the planning and survey work, we are giving what we call comprehensive attention

to the problem of the agricultural watershed lands in the Columbia River Basin, the Arkansas-White-Red, and the New England-New York area, and, of course, we have submitted our comprehensive report on the Missouri Basin to the Congress.

In those areas, covering a very substantial part of the total land area of the country and also a very significant part of the best agricultural land of the Nation, we are employing an approach that we feel more nearly meets the problems and the needs of the farm people and the public in general than just the single-purpose flood-control approach.

MISSOURI RIVER BASIN PROGRAM

Senator YOUNG. What is the total estimated cost of the program you have developed for the Missouri Basin?

Mr. WILL. The total estimated cost, Senator, including non-Federal, private, and all, in round figures is in the order of 8 billion dollars for a 30-year, long-range program.

Senator CORDON. Is that for the Missouri Basin alone?

Mr. WILL. That is correct. I should point out, however, that the Federal investment contemplated there is in the order of 3 billion dollars, which compares with, as I recall, in the order of about 5½ billion dollars for the main river-channel improvements in the Missouri River Basin.

Senator CORDON. Does that include any money for acquisition of land?

Mr. WILL. No, sir; I don't think it does. If it does at all, it is an insignificant amount.

Senator CORDON. You will recall that when you put out your first report, which is some time ago, now, which was put out on the projects in California, you had the idea that the best way to have flood control on land was to get the Government to own the land. It was for some reason or other, perhaps that God would not let the rain fall on land if the Government owned it.

I think it was a wrong approach. I hope you have left it by now.

Mr. WILL. Our approach, Senator Cordon, is primarily to work on private lands with and through the private landowners.

I might go just a little further on the Missouri Basin program, Senator Hayden.

Senator YOUNG. I am going to attend the first meeting of the recently organized Missouri Basin Survey Commission, which will be held in Kansas City this week, so any information you can give we will be helpful.

Mr. WILL. I am pointing out, Senator Young, that, as you certainly well know, that is one of the most important agricultural areas of the country. As I recall, there is about one-fourth of the agricultural crop land in that basin, of the land in the continental United States. That means that the overriding consideration there in a multiple-purpose program is agriculture and the interests of farm people. And whereas 3 billion dollars on a long-range estimate is a lot of money—we know that—compared with the 5 or 5½ billion dollars for the river-channel improvement programs which have been authorized by the Congress, we feel that our program is entirely defensible because the watershed lands are the major asset of that basin.

Senator CORDON. Has your study gone along concurrently and been integrated with the so-called flood-control studies and programs, primarily of the Corps of Engineers, but secondarily also the Bureau of Reclamation?

Mr. WILL. Unfortunately, Senator Cordon, it has not been done that way.

Senator CORDON. I am afraid it has not, and I am afraid, frankly, that what you people have been doing is what should have been done first.

Mr. WILL. That is a view that is held by a good many people, that we have heard expressed.

Senator CORDON. If you could hold the water in the areas where it falls, you would not need as much in the way of retention reservoirs downstream.

Incidentally, I think you would get more out of the water over the years.

Mr. WILL. Senator Hayden, proceeding on this informal basis, I would call to the attention of the committee in the statement filed for the record some very significant observations on results of operations work that has been installed in the 11 authorized watersheds.

Senator HAYDEN. We will be pleased to hear that.

Mr. WILL. With your permission, I will read from the statement.

EXAMPLE OF WATERSHED IMPROVEMENT WORK

An example of the watershed improvement work being carried on is that in northern Mississippi. The fertile upland soils of the Little Tallahatchie and Yazoo River watersheds are subject to excessive erosion when exposed. The original forest cover prevented most erosion, but, with clearing and production of cotton as the predominant crop, the soil was left uncovered for much of the year. In consequence, some stream channels are completely filled with the eroded material and the capacity of the upland soils to absorb the rains has been reduced. Conditions are so severe in some places that less than an inch of rain may cause damaging flooding.

The Department's watershed survey revealed that 88 percent of the first bottom lands in the Little Tallahatchie drainage basin have been damaged to some extent by sedimentation. Tremendous volumes of sand are contributed to the Yazoo Delta by meandering and head-cutting tributary watercourses.

This work is being carried on largely on a subwatershed basis. Typical of these is the steep Taylor Jones Creek subwatershed of some 12,000 acres. That area had been cleared for cotton and corn 20 to 40 years ago. Intensive clean cultivation resulted in severe gullying and subsequent filling of stream channels and destruction of fertile bottomlands by flooding, deposition of infertile sediment and swamping. The productive capacity of the limited amount of bottomlands, upon which farmers in the locality depend for cash crops, was greatly reduced.

Now more than 95 percent of the farm owners within the subwatershed are cooperating with the local soil conservation district, which is receiving assistance from the Department under the flood-control program, and have installed many needed improvement measures.

These improvements have been highly effective in preventing further amounts of sand and sediment from reaching the channels. The sediment-free run-off water has started opening up the old channels by scouring action. By now they are deep and wide enough to carry the run-off water with less than half the former overflow. Crop production has almost doubled on land previously subject to periodic flooding. Many farmers who had been unable to depend upon annual crops from their flood plain lands are now successfully farming them.

As this sort of stabilization and restoration to use of watershed and bottomlands progresses, the cumulative benefits will be felt both on the farms and in the rural communities.

LAND TREATMENT PROGRAMS

Senator YOUNG. Does your program contemplate seeding down more land with grasses?

Mr. WILL. Yes, sir; that is one of the important measures, depending upon the physical situation and the best means available to stabilize and tie down the land.

Senator YOUNG. Do you mean to shift then, to more of a livestock type of agriculture?

Mr. WILL. Generally, that is correct. And certainly in many areas it means that. I think throughout the Nation generally it does mean shifting more to grass and livestock economy.

Mr. PHILLIPS. And to trees.

Senator THYE. How can you accomplish that where the property is owned privately?

Mr. WILL. That is accomplished through out usual means of working with farm people. These watershed reports are carried out by the functional agencies in the Department. We work through education, technical assistance, sharing of cost payments of the ACP type. We actually do make direct installations with Government funds in what we call community installations, where they go beyond the limits of an individual farm.

Senator THYE. A community installation would be some type of a flood-control structure; that would not be getting the land down to sod or to legumes, would it?

Mr. WILL. It is very closely related. These are the small water courses where the water first gets into a defined channel, the extreme upstream part of the drainage systems.

And relatively small physical structures, such as detention dams and physical improvement of stream banks and gulley control and things of that kind are installed as a part of this land program we are talking about. Those physical installations complement and support the land-treatment measures such as strip cropping, reseeding of grass, forestation, and measures of that kind.

In other words, the watershed land-treatment programs consist of a variety of measures, some of them installed by the farmers themselves, with different kinds of assistance by the Department's agencies and others in the small water courses directly by the Federal Government, to some extent on a reimbursable basis, but the first investment being by the Federal Government.

The total then makes a balanced, effective program of watershed land management protection.

Senator HAYDEN. Did you do that in the Little Tallahatchie?

Mr. WILL. That is correct, sir. The type of thing I am talking about was done on the Little Tallahatchie.

COOPERATION WITH LOCAL LANDOWNERS

Senator CORDON. How long have those people been engaged in this cooperative work?

I notice you have a very heavy percentage of cooperation from local landowners. You say more than 95 percent of the owners have cooperated. How long has that cooperation continued?

Mr. WILL. Senator, the actual operation of the work began in 1947. The program was authorized by Congress in the Flood Control Act of 1944.

Senator CORDON. I recall that.

Mr. WILL. We were closed down during the war. Then it took us a little while to get organized and to get going. So that work that you are referring to was started in 1947 and has proceeded every year since that time.

Senator CORDON. Your statement here of the results obtained is rather startling to me. I hope you have not been too enthusiastic in evaluating those favorable results.

Mr. WILL. This statement, Senator, is based upon data and information of a reliable nature that was secured by our field people who are working out there and who are making these observations.

We feel that this is a fairly accurate statement.

Senator CORDON. When this work is done, you have the type of cooperation where the Government pays conservation payments through the conservation law, and that is paid to those who within a district carry out an adopted program; is that right?

Mr. WILL. That is correct. Those payments are made in what we call the ACP program. The ACP committees cooperate in bringing their approved practices and their program into the maximum support of this watershed program.

There has been a very satisfactory degree of that, particularly, I think, in the Little Tallahatchie watershed. The watershed people in the Soil Conservation Service and Forest Service lay out the technical program, then they bring in the ACP committees and soil-conservation districts and representative local bodies to cooperate.

They all then adapt and fashion their respective programs to the particular need of the watershed.

USE OF KUDZU VINE IN SOIL IMPROVEMENT

Senator HAYDEN. Grass cover has been mentioned. Can you tell us what is this plant kudzu that we hear so much about?

Mr. WILL. Kudzu is a relatively new plant. It is the wonder plant in the South. It is a vine that is an extremely fine soil binder and is also valuable in an economic way.

Senator HAYDEN. Do the cattle eat it?

Mr. WILL. Yes, sir.

Senator HAYDEN. Where did it originate?

Mr. WILL. It originated in Asia. It was introduced into this country about 30 years ago. It has been in extensive use in the South for a number of years now.

I might throw that question to the Chief of the Soil Conservation Service.

Senator THYE. Is this plant adapted to the northern regions, or is it just adaptable in the extreme South?

Mr. WILL. I would refer that question, if I may, to Dr. Salter.

Senator HAYDEN. All right, Doctor.

Dr. SALTER. The kudzu plant will grow, but not vigorously, as far north as Washington.

Senator THYE. Do you mean Washington, D. C.?

Dr. SALTER. Yes. But it does not grow very vigorously in this latitude. It is primarily adapted to areas farther south than this.

It has been particularly useful in soil conservation programs where we find a lot of poor gullied land, in the Piedmont area. Most of it has been planted from crowns, that is, pieces of plant. It will establish itself on raw, gullied land. It has to be fertilized to get vigorous growth, but it will cover up gullied spots and take root and cover up bare gullied areas and it will grow over bushes and trees and fences. You have probably seen it in that area. It is a wonderful plant from the standpoint of ground cover.

It also has about the same chemical composition as alfalfa at the right stage.

Senator CORDON. What happens when it gets to a piece of land where you do not want it? Does it keep right on growing?

Dr. SALTER. You can kill it without too much trouble. Actually, they are using it in rotation now, where, by planting it in row crop, where they only crop, say, 1 year, or, at the outside, 2 years, the plant will then reestablish itself and come on just like any other forage crop without any replanting.

It is an excellent crop from the standpoint of soil improvement. Some yields of crops are almost phenomenal on that poor land after a crop of Kudzu has been turned over.

Senator CORDON. Is it any good for forage?

Dr. SALTER. It is very good for that. It has the same composition, approximately, as alfalfa hay. It makes a good pasture crop. It does not give a long-season pasture. If you pasture too hard, it is not like grass or clover, but it does particularly well for relatively short periods.

There are actually some places in the South where they are harvesting it and dehydrating it, just like they are alfalfa in the Middle West.

Mr. PHILLIPS. If you are interested in seeing the vine, you can see one on the south side of the Naval Observatory grounds in Washington, just above the British Embassy on Massachusetts Avenue. The leaves die down during the winter; so there isn't much to see at this time, but they will soon be coming out and they will cover that whole hill.

PRACTICAL VALUE OF WATERSHED PROGRAMS

Senator HAYDEN. You may proceed with your statement, sir.

Mr. WILL. I would like to call attention to another practical test which we recently observed in the Los Angeles watershed in California, where they had an extremely heavy rainfall, an intense rainfall in a short period.

It was estimated that measures installed on one group of four subwatersheds prevented damages in the amount of $200,000 to agricultural land and other property, and that similar works of improvement installed on another group of four subwatersheds prevented an estimated $100,000 additional similar damages.

Floodwater and sediment damages to the areas in the San Fernando Valley not yet protected by watershed-improvement installations amounted to an estimated $731,750. These damages included damages to crops, dwellings, business establishments, streets, roads, bridges, and personal property.

In addition to the evaluated losses, five lives were lost in this area, and a serious health hazard was created by overflow of cesspools.

So, we are presenting those results of that work as an example of practical accomplishment. Of course, we unfortunately have this program in operation in a relatively small part of the country as a whole. We have just these 11 authorized watersheds throughout the country.

Senator HAYDEN. How were they authorized? Was it by an act of Congress?

Mr. WILL. By an act of Congress; yes, sir.

Senator CORDON. It is just the same as a flood-control report—is it not?—except that it sets up a different modus operandi of doing the job.

Mr. WILL. That is correct. The normal procedure is that, under the basic act, Congress authorizes preliminary examinations and surveys of specified watersheds. Money is appropriated for that purpose; the survey studies are made; reports are presented to Congress. The next step, then, is congressional authorization of the watershed reports. Then, after that, the next step is actual operations or installation of works of improvement. These procedural steps are similar to those used by the Army and the Bureau of Reclamation.

GENERAL BASIN INVESTIGATIONS

Senator HAYDEN. I notice your last item here in your statement refers to "general basin investigations." Would you mind discussing that?

Mr. WILL. With your permission, Mr. Chairman, I will read that from the statement. It is relatively short. [Reading:]

In the Colorado River area there is an urgent need to prepare a program on a comprehensive and multiple-purpose basis for the development, use, and conservation of the watershed lands. This department has been aware of the need for such a program for a number of years as the watershed-land problems have progressively become more pressing and acute.

Within the last 3 years the Congress has ratified the interstate compact entered into between the States of the upper Colorado River Basin. This compact has provided for the division and regulation of the waters of the upper basin of the Colorado. In order to provide the physical structures necessary to carry out the terms of the compact and to permit the full utilization of the waters of the Colorado River, the Department of the Interior has recently been engaged in developing a complete engineering plan for ultimate installation on the river.

In accordance with Federal Interagency River Basin Committee procedure the Department of the Interior has advised us of the nature of these river-development plans. They call for the installation of an extensive system of structures on the main stem of the river.

The preparation of these plans by the Department of the Interior emphasizes and makes imminent the need for a multiple-purpose, complementary program for the proper use and conservation treatment of the watershed lands of the basin.

The study should get under way immediately to determine just what can be done as a basis for field operations. The deterioration of the middle mountain watersheds of the Colorado River has caused extensive mountain valley entrenchment. This process has poised much material that may quickly move down into the main channel of the river at an increasing rate. Even now, during a comparatively dry rainfall cycle in the Colorado Basin, sediment is being carried into the headwaters of Lake Mead at the substantial average rate of more than 100,000 acre-feet per year. The sooner the rate of movement of soil from watershed lands into the river is reduced, the longer will be the useful life of present and future main-stream reservoirs. To initiate a study of these watershed lands, an estimate of $200,000 is proposed for 1953.

Progress is being made on development of a comprehensive agricultural program for use of the land and water resources of the Columbia River Basin. According to the work schedule previously supplied the committee, this activity will continue during fiscal year 1953.

Senator HAYDEN. I had occasion to look into the history of the Navajo Tribe of Indians, and the area that they occupy in northern Arizona and part of New Mexico and southern Colorado and Utah is semiarid. Apparently, the conditions were stabilized until the country was severely overgrazed. The Navajos were given sheep when they were released from captivity right after the end of the Civil War.

The flocks multiplied, and the result of it was that erosion began.

The Navajos now have a tradition about the year that the trees went out on the Little Colorado River when there was a very heavy rainfall and this excessive drainage just gutted the river bottom with a magnificent growth of cottonwood trees.

They refer to that as "the year that the trees went out." They went out into the Colorado River.

I think the studies of the Reclamation Bureau show that, out of the Colorado River and out of the San Juan, where similar conditions existed, tremendous quantities of silt are deposited in the main stream which go down and are caught by the backwaters of the Davis Dam.

Fortunately, that is a very large reservoir in capacity and it can stand that, but it cannot stand it forever.

The things that you are talking about can stop the erosion on the land itself and are the real cure to check that. Anything else you put in the streams will just silt up as fast as the silt comes down.

Mr. WILL. Mr. Chairman, I would like to add that we are continuing our studies in the Arkansas-White-Red Basins and the New England-New York region—studies that were begun in cooperation with other Federal agencies and State agencies about a year and a half ago. We are just about at the center point in that effort.

We did not mention those basin studies particularly in this statement because we are not requesting increases for them. That is work that was under way in the previous fiscal year—work in each area authorized by special act of Congress.

Senator HAYDEN. And do you have no money to carry it on now?

Mr. WILL. We have money in fiscal year 1952. In the statement we presented to you we mention that the President's budget for fiscal year 1953 provides funds for these studies.

But it is at the same level as last year. So, our prepared statement did not mention it because it did not appear as an increase. It is the same base as last year.

But we are making special mention of it now because of the House action that you referred to at the beginning of the hearing, on which I suppose you will wish the views of the Assistant Secretary.

Senator HAYDEN. We will be glad to hear from you now, Mr. Secretary.

EFFECT OF HOUSE COMMITTEE ACTION

Mr. HUTCHINSON. Mr. Chairman, it is within that area that I wish to speak at this time, with your permission.

Senator HAYDEN. How much did you ask the budget?

Mr. HUTCHINSON. For general basin investigations, we asked for $450,000 to continue the work in the Arkansas-White-Red and the

New England-New York areas, and to start work in the Colorado area.

However, the House did not allow that, but added that to the item under "Works of improvement."

We feel that that is a mistake and would prevent continuing our program as we now have it under way and as we feel it should be undertaken in the year ahead 1953.

Senator HAYDEN. I take it that, with the money the House gave for "Works of improvement," you could take that money and get a quicker result with it, if you were doing something that had been already planned and worked out in detail, than if you spent the money in preparation of plans which would come in fruition at a later time.

Mr. HUTCHINSON. Yes. That seems to be a reasonable interpretation of the House committee on that item.

Senator HAYDEN. What, in your judgment, is the best policy for Congress to follow?

Mr. HUTCHINSON. We feel that we should be allowed this $450,000 as it is in the estimate, so that we might continue the river-basin survey program without finding our program bogging down soon because of lack of this preliminary or preparatory work, our basin-investigation work.

Senator HAYDEN. We had that same difficulty in connection with the United States Reclamation Service and the Corps of Engineers. There has been that disposition on the part of the House to cut down the planning money and emphasize finishing up what you have.

But, when you do that, one of these days you are going to run out of planned projects.

That, in my judgment, at least, ought to be worked on with the idea that we are not going to quit entirely on flood-control efforts of one kind and another at a certain given date.

Yet, if you simply take approved projects and stop and say "That is the end of it" and allow no money for planning, certainly there will come a time when your organization will have nothing to do.

ESTIMATED COST OF AGRICULTURAL FLOOD-CONTROL PROJECTS

Senator CORDON. That brings up this question: What is the total estimated cost of the agricultural flood-control measures on all the 11 projects?

Mr. WILL. It is in the order of about $152 million, as I recall, according to the last revised estimate.

Senator CORDON. It is $7 or $8 billion in Missouri alone.

Mr. WILL. That is not all Federal.

Mr. ROBERTS. That is not included in the 11 approved watersheds.

Mr. PHILLIPS. That is not yet authorized, Senator. The 11 are the only ones authorized.

Senator CORDON. So, you do not have the Missouri authority yet; do you?

Mr. PHILLIPS. No.

Mr. WILL. On the Senator's point, Mr. Secretary, I might mention this: That, as we understand the Army's position, they do have quite a backlog of authorized projects, whereas the Department of Agriculture, having started much later, has practically no backlog. The 11

authorized watershed projects are all we have in the United States, and they are a drop in the bucket compared with the total problem.

So, our over-all program is chiefly in the survey state. Two, three, or four years hence we should be moving more in the position that the Army is in now.

Senator HAYDEN. The Army has authorized projects; that is, the Corps of Engineers has them authorized to make certain preliminary reports, and a preliminary report is submitted to Congress and then Congress authorizes the project.

Senator CORDON. That is true of these, too.

Senator HAYDEN. But it is a very different thing from getting down to the details of what should be done so that the Corps of Engineers can let a contract. That is where the planning money has been cut out.

Your situation would be quite similar if it hinges on the same basis.

IMPORTANCE OF GENERAL BASIN INVESTIGATIONS

Mr. ROBERTS. May I interpose just a minute here, Mr. Secretary?

Mr. HUTCHINSON. Yes.

Mr. ROBERTS. The importance of the request of the Department to shift this $450,000 back to the general basin investigations work is this: The work is being done in the Arkansas White-Red, and the New York-NewEngland areas, and is proposed for the Colorado Basin, in cooperation and concurrently with the planning and preliminary survey work by the Corps of Engineers of the Army and the Department of the Interior.

Senator CORDON. May I interrupt you to suggest that last year, at least, there were no funds allowed for that other general investigation which was to go along concurrently with the old. What about that?

Mr. ROBERTS. In the Interior Department?

Senator CORDON. In the two of them.

Mr. ROBERTS. I would like Mr. Will to respond to your question, but it is my understanding they are working in those areas right now, Senator Cordon.

Mr. WILL. It may be, Mr. Chairman, that the Senator is referring more particularly to the so-called planning fund of the Army engineers rather than the survey funds.

Senator CORDON. I am talking about general investigation. The money comes for those projects which have already passed the general investigation and authorization stage.

Mr. WILL. The situation in the Arkansas White-Red Basin and the New England-New York region, during the current fiscal year, at the present time, is that the Army is working with us there along with the Department of the Interior, the Public Health Service, the Department of Commerce, and the Federal Power Commission, and the respective State agencies.

It is a going concern at the present time and we are part of the whole thing.

Senator HAYDEN. Let me see if I get it straight. I think the situation was that the House allowed no money for those purposes at all. We did succeed in getting some in, but not the extent that we carried in the budget last year.

Senator CORDON. If all of those agencies are there, somebody spends some Federal money that has not been authorized for that purpose. That is the way I look at it.

Mr. ROBERTS. The point I want to make is—and it goes back to the point Senator Cordon made earlier in this hearing—that if this agricultural work on the upstream areas is to be done when it should be done, before the downstream measures are constructed, then it is very important that the planning work on the agricultural areas be done concurrently, at least, with the planning for the work downstream.

Senator CORDON. I agree with you. I think it ought to be done in advance of it.

Mr. ROBERTS. If that is to be done, then this $450,000, which the House transferred from the general basin investigation work to construction work on presently authorized watersheds, should be moved back as it was in the budget.

It does not require any increase in appropriations, it is merely a shift within the total amount allowed in the House bill.

Senator CORDON. Where would you feel we were, Mr. Secretary, if you were handed the House report with the statement that is in it at the present time—and assuming that the full committee will probably adopt it—where they say no funds are provided for general basin investigation?

Suppose the matter is before the committee on this side, and assuming that this committee may differ with the House in that respect—as it has in the past—then when it went before the House it took the other view and said with respect to these investigations that:

"We feel they should be made"—so that you would have one report saying no and another report saying yes, where would you be?

Mr. ROBERTS. I think we would ask for clarification in conference, Senator Cordon.

Mr. HUTCHINSON. We would expect that before it would come to us it would be clarified by the Congress.

Senator CORDON. In other words, if it was not clarified by the conference, where would it leave you? Would you spend the money, or not?

What I am trying to get at is: Would the two statements cancel each other and leave you to use your own judgment?

Mr. HUTCHINSON. I would hardly think so.

Senator CORDON. I would agree with you.

Mr. HUTCHINSON. I rather think, Senator, that our first effort would be to come back to the two committees and try to get a reconciliation in one way or another so that we would know how to proceed.

Senator HAYDEN. We will have to recess now.

Mr. WILL. Mr. Chairman, in addition to the statement that the Department representative has made, we have the representatives of the primary bureaus that carry on this program, the Soil Conservation Service and the Forest Service.

You may wish to see if they have anything to add to what has been said.

Senator HAYDEN. We are rather pressed for time in the hearings. We must cover a lot of ground. I might suggest that if either one of these services has any statement they would like to have included in this record, I think we have developed the main idea, so far as

this committee is concerned, and it might be well to ask those services if they will put in some statements for the record.

Mr. WILL. Surely.

(Statements covering flood-control work of the Forest Service and Soil Conservation Service follow:)

PRELIMINARY EXAMINATIONS AND SURVEYS

The Executive order (No. 10318) establishing the Missouri Basin Survey Commission authorized and directed agencies of the executive branch of the Government having functions related to the responsibilities of the Commission to cooperate with the Commission and to furnish it certain information and assistance. As a result, the Department is likely to be called on to furnish such assistance and planned to utilize some of the funds estimated for preliminary examinations and surveys for that purpose.

STATEMENT BY THE FOREST SERVICE

Effect on flood-prevention activities of the Forest Service as a result of the action taken by the Appropriation Committee, House of Representatives, in reporting out the Department of Agriculture appropriation bill for the fiscal year 1953

Preliminary examinations and surveys

The funds for preliminary examinations and surveys in the appropriation bill, as reported by the House committee, represent a reduction of $724,760 below the 1953 budget figure for the Department of Agriculture. As compared to the funds available for the fiscal year 1952, the proposed allotment of $1 million means almost a 50-percent reduction in activities by the Department of Agriculture on preliminary examinations and surveys under the flood-control acts. During the fiscal year 1952, the Forest Service has 11 detailed surveys in active process, and 3 more temporarily suspended for lack of funds to complete them. Also the Forest Service has been participating substantially in the flood-control survey phases of program development in the Columbia, Arkansas-Red-White, New England-New York, and Colorado River drainage basins.

Under the proposed reduction in funds, below budget estimates, a serious further curtailment will be necessary in flood-control surveys. For example, the present Forest Service contributions to watershed program development in the major drainage basins mentioned above will have to be curtailed. This will mean that the Department of Agriculture will be further retarded in developing watershed treatment programs which should be properly coordinated with the water resource development plans of other departments. Only the barest minimum of survey work will be possible in the fiscal year 1953 in the Colorado River watershed, where other Federal agencies are proceeding with the preparation of basin development plans.

Aside from reduced work in the large drainage basins, surveys cannot be continued on the Hatchie-Loosahatchie-Wolf-Nonconnah watersheds in Mississippi and Tennessee; and there will be no opportunity to plan flood-damage reduction programs in other watersheds where local interest is being expressed—such as in the upper Susquehanna River watershed in New York and Pennsylvania, the Carson-Truckee-Walker area in California and Nevada, the Bear River in Utah, Idaho and Wyoming, or the Little Sandy and Tygart River watersheds in West Virginia.

As a very undesirable accompaniment of these reductions, the Forest Service would have to lose almost one-half of the personnel who have been especially trained for work in developing and executing watershed treatment programs. Therefore, the dates for completing all surveys will be delayed.

Works of improvement

The House committee report provided for an increase in funds available for works of improvement from $5,575,240 to $6,750,000. The portion of this increase that would be available to the Forest Service would be used to accelerate the installation of measures in congressionally approved watershed improvement programs where work is farthest behind schedule or critically needed. For example, the reforestation work to stabilize gullies in the Little Tallahatchie and Yazoo watersheds could be stepped up by more nearly meeting the demands of local people for planting stock, where the need for such stock far exceeds the supply.

STATEMENT BY THE SOIL CONSERVATION SERVICE

Effect on flood-prevention activities of the Soil Conservation Service as a result of action taken by the House of Representatives Appropriation Committee in reporting out the Department of Agriculture appropriation bill, fiscal year 1953

Preliminary examinations and surveys

The House committee report reduced funds for preliminary examinations and surveys from $1,724,760 provided in the budget to $1,000,000.

The portion of the $1,000,000 estimated to be available to the Soil Conservation Service represents nearly a 60 percent reduction from the amount available to the Service for surveys in the fiscal year 1952. The funds available in 1952 include a substantial part of an item of $186,800 in the second supplemental appropriation act for the fiscal year 1952 to expedite surveys in critical areas in the Missouri and upper Mississippi River watersheds.

The effect of this drastic reduction in funds for the survey activity will be greatly to curtail surveys in the area stricken by the flood of last July and elsewhere. It will result in a loss of more than one-half of the personnel who have been especially trained in flood-control investigations and will increase the cost of surveys now under way by delaying their completion.

It will be necessary to discontinue surveys on the following watersheds:

San Francisco Bay area, California.
Upper Chesapeake Bay area, Maryland, Delaware.
Mobile, Ala., Ga., Tenn., Miss.
Wabash, Ind., Ohio

It will cause considerable reduction in the rate of progress on surveys already well advanced, such as on the following:

Arkansas-White-Red, Colo., N. Mex., Kans., Tex., Okla., Mo., Ark., La.
Red River of the North, Minn., S. Dak., N. Dak.
Sabine-Neches, Tex., La.
Kansas, Kans., Nebr., Colo.
Colorado (Gila), Ariz., N. Mex.

The slowing down of the survey activity will further delay the possibility of action by the Congress to authorize initiation of works of improvement for flood prevention on watersheds in critical areas due to the additional time required to complete such surveys.

During the past 2 years and especially following the disastrous Midwestern flood of 1951, there has been a phenomenal growth of local interest in beginning the job of flood prevention and flood control on the lands where the rain falls and in the small watercourses. Scores of local watershed associations have been formed to further the objectives of watershed treatment in the interest of flood prevention. In a number of States such organizations now cover most or all of several large watersheds. These States include Iowa, Nebraska, Kansas, Missouri, Oklahoma, and Texas, with scattered associations in New York, New Jersey, Pennsylvania, West Virginia, North Carolina, Ohio, Illinois, Michigan, Tennessee, California, and other States. Much of this spontaneous local interest arises from the realization that the Nation's flood-control endeavor has been widely unbalanced, with more than $50 being appropriated for downstream reservoirs and levees to every $1 appropriated for flood-prevention work on watersheds, despite the fact that approximately 25 percent of all flood damage occurs in downstream areas and that approximately 75 percent occurs on upstream watershed areas.

Local people are increasing their demands on the Service for help in developing watershed programs to achieve more equitable distribution of flood damage prevention work. The effect of the drastic reduction in funds for surveys will be to seriously cripple the Service's part of Department efforts to provide more widespread assistance to local people under the Flood Control Acts.

Works of improvement

The House committee report provided for an increase in funds available for works of improvement from the budget figure of $5,575,240 to $6,750,000. The portion of this increase that would be available to the Soil Conservation Service would be used to accelerate the installation of measures included in watershed programs approved by the Congress for 11 watersheds, authorized in the Flood Control Act of 1944. Work has been under way on these 11 watersheds since 1947. All authorized programs were recommended for completion in periods of time ranging from 10 to 24 years for the respective watersheds. Work on each of the watersheds is considerably behind schedule. The need for acceleration in

this work to meet the urgent requests of local groups within the authorized watersheds was recognized by provision of a small increase in the budget. Any increase that may be available would be utilized on those watersheds that are farthest behind and where considerable concentration of effort must be exerted during the next several years if the programs are to be completed within the time periods recommended in survey reports. Any increase that may be available would help meet the Department's share of the cooperative work mutually agreed upon with the local interests which have demonstrated their willingness and capacity to work with the Federal Government in installation of flood-prevention measures in these watersheds.

Senator HAYDEN. We thank you, gentlemen.

The committee stands in recess until 10:30 tomorrow morning.

(Whereupon, at 12:20 p. m., Tuesday, April 1, 1952, the subcommittee recessed, to reconvene at 10:30 a. m., Wednesday, April 2, 1952).